

Application Serial No. 10/663,875

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Remarks/Arguments:

Claims 1-57 are pending. Claims 9-10, 12-18, and 20-57 are withdrawn from consideration in response to the Restriction Requirements. Claims 2, 4-6, and 8 are amended to reflect election of a specific sequence in each claim. Claims 1-8, 11, and 19 encompass the elected invention. Claims 1 and 7 are also amended. Support for the amendments can be found, e.g., at page 2, lines 16-17; page 7, lines 3-4; and page 22, lines 12-22 of the specification. No new matter is introduced.

Groups I and III

In the Restriction Requirement, the Examiner required an election between Group I and III inventions:

- I. Claims 2-6, 8, 11, and 19, drawn to an isolated RNA comprising an intron RNA that is released in a cell thereby modulating the function of a target gene, wherein the isolated RNA does not contain a combination of a splice donor site that includes 5'-GU(A/G)AGU-3' and a splice acceptor site that includes 5'-CU(A/G)A(C/U)NG-3', and a cultivated cell thereof.
- III. Claims 13-15, drawn to an animal comprising the isolated RNA comprising an intron RNA that is released in a cell thereby modulating the function of a target gene, wherein the isolated RNA does not contain a combination of a splice donor site that includes 5'-GU(A/G)AGU-3' and a splice acceptor site that includes 5'-CU(A/G)A(C/U)NG-3'.

This restriction requirement is respectfully traversed. First, the Examiner did not provide any reason why the restriction is required between Groups I and III. Second, Group I and III inventions are closely related. Group I are drawn to an isolated RNA, a cultivated cell containing the RNA, and a composition comprising the RNA. Group III are drawn to an animal comprising the isolated RNA. As such, the status in the art and the field of search for Groups I and III would largely overlap. There would be no serious burden on the Examiner if no restriction is required between Groups I and III. Therefore, Applicants respectfully request that Groups I and III be combined.

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The Examiner also required an election between Group II and IV inventions:

- II. Claims 9-10, 12, 16, and 20, drawn to a DNA template for the isolated RNA comprising an intron RNA that is released in a cell thereby modulating the function of a target gene, wherein the isolated RNA does not contain a combination of a splice donor site that includes 5'-GU(A/G)AGU-3' and a splice acceptor site that includes 5'-CU(A/G)A(C/U)NG-3', and a cultivated cell thereof.
- IV. Claims 16-18, drawn to an animal comprising a DNA template for the isolated RNA comprising an intron RNA that is released in a cell thereby modulating the function of a target gene, wherein the isolated RNA does not contain a combination of a splice donor site that includes 5'-GU(A/G)AGU-3' and a splice acceptor site that includes 5'-CU(A/G)A(C/U)NG-3'.

For the reasons similar to those presented for Groups I and III, Applicants respectfully traverse this restriction requirement and request that Groups II and IV be combined.

Groups I and II, III and IV, V and VI, VII and VIII, IX and XI, X and XII

The Examiner required an election between Groups I and II, III and IV, V and VI, VII and VIII, IX and XI, and X and XII. This restriction requirement is respectfully traversed.

Groups I, III, V, VII, IX, and X involve an isolated RNA; Groups II, IV, VI, VIII, XI, and XII involve a DNA template for the RNA. Contrary to the Examiner's assertion, an RNA and its template DNA are closely related molecules, because the RNA is a transcript of the template DNA. As such, the status in the art and the field of search for the RNA groups (i.e., Groups I, III, V, VII, IX, and X) and their respective DNA groups (i.e., Groups II, IV, VI, VIII, XI, and XII) would largely overlap. There would be no serious burden on the Examiner if no restriction is required between the respective RNA and DNA groups. Therefore, Applicants respectfully request that Group I be combined with Group II, Group III be combined with Group IV, Group V be combined with Group VI, Group VII be combined with

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Group VIII, Group IX be combined with Group XI, and Group X be combined with Group XII.

Claims 4-6

The Examiner further required that, upon election of Group I, Applicants must elect a specific sequence from each of claims 4-6 as independent and distinct inventions. This restriction requirement is respectfully traversed.

Claims 4-6 depend from claim 2. Claim 2 is directed to an isolated RNA of claim 1, wherein the isolated RNA contains a splice donor site that includes 5'-GUA(A/-)GAG(G/U)-3', a splice acceptor site that includes 5'-G(A/U/-)(U/G)(C/G)C(U/C)(G/A)CAG-3' (SEQ ID NO:1), a branch site that includes 5'-UACU(A/U)A(C/U)(-/C)-3', a poly-pyrimidine tract that includes 5'-(U(C/U))₁₋₃(C/-)U₇₋₁₂C(C/-)-3' (SEQ ID NO:2) or 5'-(UC)₇₋₁₂NCUAG(G/-)-3' (SEQ ID NO:3), or a combination thereof. Claim 2 recites a splice donor site including a generic sequence of 5'-GUA(A/-)GAG(G/U)-3', a splice acceptor site including a generic sequence of 5'-G(A/U/-)(U/G)(C/G)C(U/C)(G/A)CAG-3' (SEQ ID NO:1), and a branch site including a generic sequence of 5'-UACU(A/U)A(C/U)(-/C)-3'. Claim 4 recites four species of the splice donor site, claim 5 recites three species of the splice acceptor site, and claim 6 recites two species of the branch site. Contrary to the Examiner's assertion, the sequences recited in claim 4 are structurally related because they are within the generic sequence of 5'-GUA(A/-)GAG(G/U)-3' recited in claim 2. These sequences are also functionally related because all of them serve as splice donor sites. Likewise, the sequences recited in claim 5 or 6 are also structurally and functionally related. Therefore, it is improper to require the election of a specific sequence from each of claims 4-6 as independent and distinct inventions. The restriction requirement should be withdrawn.

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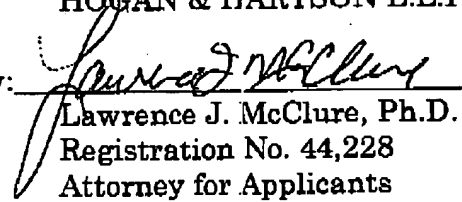
If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

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